```
UUU           UUU  EEEEEEEEEEEEEE   TTTTTTTTTTTTTT   PPPPPPPPPPP        SSSSSSSSSSSS  YYY           YYY
UUU           UUU  EEEEEEEEEEEEEE   TTTTTTTTTTTTTT   PPPPPPPPPPP        SSSSSSSSSSSS  YYY           YYY
UUU           UUU  EEEEEEEEEEEEEE   TTTTTTTTTTTTTT   PPPPPPPPPPP        SSSSSSSSSSSS  YYY           YYY
UUU           UUU  EEE                    TTT        PPP        PPP  SSS               YYY           YYY
UUU           UUU  EEE                    TTT        PPP        PPP  SSS               YYY           YYY
UUU           UUU  EEE                    TTT        PPP        PPP  SSS               YYY           YYY
UUU           UUU  EEE                    TTT        PPP        PPP  SSS                  YYY     YYY
UUU           UUU  EEE                    TTT        PPP        PPP  SSS                  YYY     YYY
UUU           UUU  EEEEEEEEEEE            TTT        PPPPPPPPPPP        SSSSSSSSS            YYY
UUU           UUU  EEEEEEEEEEE            TTT        PPPPPPPPPPP        SSSSSSSSS            YYY
UUU           UUU  EEEEEEEEEEE            TTT        PPPPPPPPPPP        SSSSSSSSS            YYY
UUU           UUU  EEE                    TTT        PPP                       SSS          YYY
UUU           UUU  EEE                    TTT        PPP                       SSS          YYY
UUU           UUU  EEE                    TTT        PPP                       SSS          YYY
UUU           UUU  EEE                    TTT        PPP                       SSS          YYY
UUUUUUUUUUUUUUUUU  EEEEEEEEEEEEEE         TTT        PPP          SSSSSSSSSSSS            YYY
UUUUUUUUUUUUUUUUU  EEEEEEEEEEEEEE         TTT        PPP          SSSSSSSSSSSS            YYY
UUUUUUUUUUUUUUUUU  EEEEEEEEEEEEEE         TTT        PPP          SSSSSSSSSSSS            YYY
```

```
SSSSSSS    AAAAAA   TTTTTTTTTT   SSSSSSS    SSSSSSS    SSSSSSS    666666       11
SSSSSSS    AAAAAA   TTTTTTTTTT   SSSSSSS    SSSSSSS    SSSSSSS    666666       11
SS        AA    AA      TT       SS         SS         SS         66         1111
SS        AA    AA      TT       SS         SS         SS         66         1111
SS        AA    AA      TT       SS         SS         SS         66           11
SS        AA    AA      TT       SS         SS         SS         66           11
SSSSSS    AA    AA      TT       SSSSSS     SSSSSS     SSSSSS     6666666       11
SSSSSS    AA    AA      TT       SSSSSS     SSSSSS     SSSSSS     6666666       11
    SS    AAAAAAAAAA    TT           SS         SS         SS    66    66      11
    SS    AAAAAAAAAA    TT           SS         SS         SS    66    66      11
    SS    AA    AA      TT           SS         SS         SS    66    66      11      ....
    SS    AA    AA      TT           SS         SS         SS    66    66      11      ....
SSSSSSS   AA    AA      TT       SSSSSSS    SSSSSSS    SSSSSSS    666666     111111    ....
SSSSSSS   AA    AA      TT       SSSSSSS    SSSSSSS    SSSSSSS    666666     111111    ....


LL              IIIIII      SSSSSSS
LL              IIIIII      SSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II            SS
LL                II            SS
LLLLLLLLL      IIIIII      SSSSSSS
LLLLLLLLL      IIIIII      SSSSSSS
```

SATSSS61
V04-000

C 10
SATS SYST SERV TESTS $SCH/CANWAK (SUCC   16-SEP-1984 00:59:38   VAX/VMS Macro V04-00   Page   1
                                          5-SEP-1984 04:32:50   [UETPSY.SRC]SATSSS61.MAR;1   (1)

```
0000    1              .TITLE   SATSSS61 SATS SYST SERV TESTS  $SCH/CANWAK (SUCC S.C.)
0000    2              .IDENT   'V04-000'
0000    3
0000    4
0000    5   ;******************************************************************************
0000    6   ;*                                                                            *
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0000   24   ;*                                                                            *
0000   25   ;*                                                                            *
0000   26   ;******************************************************************************
0000   27   ;
0000   28
0000   29   ;++
0000   30   ; FACILITY:      SYSTST (SATS SYSTEM SERVICE TESTS)
0000   31   ;
0000   32   ; ABSTRACT:
0000   33   ;
0000   34   ;              THIS MODULE CONTAINS SUBROUTINES WHICH, WHEN LINKED
0000   35   ; WITH SUCCOMMON.OBJ, FORM TEST MODULE SATSSS61 TO TEST SUCCESSFUL
0000   36   ; OPERATION OF THE $SCH/CANWAK SYSTEM SERVICE. THE SERVICE IS INVOKED
0000   37   ; UNDER VARIOUS INPUT CONDITIONS WITH VARYING INPUT PARAMETERS. ONLY
0000   38   ; SUCCESSFUL STATUS CODES ARE EXPECTED IN THIS TEST MODULE.  CORRECT
0000   39   ; OPERATION OF THE SERVICE FOR EACH OF ITS ISSUANCES IS VERIFIED BY
0000   40   ; CHECKING FOR AN SS$ NORMAL STATUS CODE, EXPECTED RETURN ARGUMENTS
0000   41   ; AND EXPECTED FUNCTIONALITY PERFORMED.
0000   42   ;
0000   43   ; ENVIRONMENT: USER MODE IMAGE; NEEDS CMKRNL PRIVILEGE,
0000   44   ;              DYNAMICALLY ACQUIRES OTHER PRIVILEGES, AS NEEDED.
0000   45   ;
0000   46   ; AUTHOR: THOMAS L. CAFARELLA,           CREATION DATE: APR, 1977
0000   47   ;
0000   48   ; MODIFIED BY:
0000   49   ;
0000   50   ;     V03-001 LDJ0001        Larry D. Jones,         23-Jun-1983
0000   51   ;             Removed the quota list to force the use of the
0000   52   ;             default sysboot quotas.
0000   53   ;--
```

D 10

SATSSS61   SATS SYST SERV TESTS $SCH/CANWAK (SUCC 16-SEP-1984 00:59:38 VAX/VMS Macro V04-00   Page   2
V04-000   DECLARATIONS   5-SEP-1984 04:32:50 [UETPSY.SRC]SATSSS61.MAR;1   (1)

```
                0000    55                    .SBTTL  DECLARATIONS
                0000    56 ;
                0000    57 ; INCLUDE FILES:
                0000    58 ;
                0000    59          $PRVDEF                        ; PRIVILEGE BIT DEFINITIONS
                0000    60          $PHDDEF                        ; PROCESS HEADER OFFSETS
                0000    61          $PQLDEF                        ; PROCESS QUOTA CODES
                0000    62          $PCBDEF                        ; PCB LABELS
                0000    63          $DIBDEF                        ; DEVICE INFO BLOCK OFFSETS
                0000    64 ;
                0000    65 ; MACROS:
                0000    66 ;
                0000    67 ;
                0000    68 ; EQUATED SYMBOLS:
                0000    69 ;
      00989680  0000    70 ONE_SEC          = 10*1000*1000        ; 10 MILLION 100-NANOSECOND UNITS (OR 1 SEC)
                0000    71 ;
                0000    72 ; OWN STORAGE:
                0000    73 ;
```

SATSSS61
V04-000

E 10
SATS SYST SERV TESTS $SCH/CANWAK (SUCC   16-SEP-1984 00:59:38   VAX/VMS Macro V04-00   Page   3
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```
                        00000000      75          .PSECT  RODATA,RD,NOWRT,NOEXE,LONG
                             0000      76 TEST_MOD_NAME:: STRING  C,<SATSSS61>        ; TEST MODULE NAME
                             0009      77 TEST_MOD_NAME_D: STRING  I,<SATSSS61>       ; TEST MODULE NAME DESCRIPTOR
                             0019      78 MSG1_INP_CTL:   STRING  I,<  SSSCW!4ZW: CONDITIONS:>
                             0039      79                                            ; FAO CTL STRING FOR MSG1 IN SUCCOMMON.MAR
                             0039      80 MSG3_ERR_CTL::  STRING  I,< *SSSCW!4ZW: !AS>
                             0051      81                                            ; FAO CTL STRING FOR MSG3 IN SUCCOMMON.MAR
                             0051      82 SUBJPRN:        STRING  I,<SATSSS61 CRE>  ; PROCESS & MBX NAME FOR CREATED PROCESS
                             0065      83 IMAGNAM:        STRING  I,<SYSTST$RES:SATSUT07.EXE> ; IMAGE NAME FOR CREATED PROC
 31 36 53 53 0000008C'010E0000' 0084  84 CLUSTER:        .ASCID  /SS61/           ; STRING DESCRIPTOR FOR CLUSTER
                             0090      85                                            ; ... FOR CREATED PROCESS COMMUNICATION
                             0090      86 ;QUOTALIST:     $QUOTA  CPULM,0          ; INFINITE CPU
                             0090      87 ;               $QUOTA  BYTLM,512        ; BYTE LIMIT FOR BUFFERED I/O
                             0090      88 ;               $QUOTA  FILLM,2          ; OPEN FILE COUNT LIMIT
                             0090      89 ;               $QUOTA  PGFLQUOTA,10     ; PAGING FILE QUOTA
                             0090      90 ;               $QUOTA  PRCLM,2          ; SUBPROCESS QUOTA
                             0090      91 ;               $QUOTA  TQELM,3          ; TIMER QUEUE ENTRY QUOTA
                             0090      92 ;               $QUOTA  LISTEND          ; DEFINES END OF LIST
       FFFFFFFF FF676980    0090      93 DELTA_1SEC:     .LONG   -ONE_SEC,-1      ; DELTA TIME VALUE FOR 1 SECOND
       FFFFFFFF FECED300    0098      94 DELTA_2SEC:     .LONG   -2*ONE_SEC,-1    ; DELTA TIME VALUE FOR 2 SECONDS
       FFFFFFFF FE363C80    00A0      95 DELTA_3SEC:     .LONG   -3*ONE_SEC,-1    ; DELTA TIME VALUE FOR 3 SECONDS
       FFFFFFFF FA0A1F00    00A8      96 DELTA_10SEC:    .LONG   -10*ONE_SEC,-1   ; DELTA TIME VALUE FOR 10 SECONDS
       FFFFFFFF FFD9DA60    00B0      97 DELTA_QSEC:     .LONG   -<ONE_SEC/4>,-1  ; DELTA TIME VALUE FOR A QUARTER-SECOND
       00000000 01C9C380    00B8      98 POS_3SEC:       .LONG   3*ONE_SEC,0      ; 3 SECONDS (POSITIVE VALUE)
                             00C0      99 TIME_PAST:      STRING  I,<25=DEC-1973 21:46:00.00> ; A TIME IN THE PAST
```

SATSSS61
V04-000

F 10
SATS SYST SERV TESTS $SCH/CANWAK (SUCC 16-SEP-1984 00:59:38 VAX/VMS Macro V04-00   Page   4
DECLARATIONS   5-SEP-1984 04:32:50 [UETPSY.SRC]SATSSS61.MAR;1   (1)

```
        00000000       101            .PSECT  RWDATA,RD,WRT,NOEXE,LONG
00000008  0000         102 PRIVMASK:   .BLKQ   1               ; ADDR OF PRIVILEGE MASK (IN PHD)
0000000C  0008         103 MBXCHAN:    .BLKL   1               ; CHAN. NO. FOR MAILBOX FOR CREATED PROCESS
          000C         104 MBXCHANINFO:                        ; CHANNEL INFO RETURNED BY GETCHN
00000074, 000C         105            .LONG   DIB$K_LENGTH
00000014' 0010         106            .ADDRESS .+4
00000088  0014         107            .BLKB   DIB$K_LENGTH
0000008C  0088         108 MBXUNIT:    .BLKL   1               ; SAVE AREA FOR MAILBOX UNIT NUMBER
          008C         109 MBXBUFF:    STRING  0,120           ; MAILBOX BUFFER FOR CREATED PROCESS
00000110  010C         110 DEST_PIDADR: .BLKL  1               ; DESTINATION PID ADDR, WRITTEN BY S.S.
00000114  0110         111 ZEROPID:    .BLKL   1               ; PID OF ZEROES
00000000  0114         112 SELFPID:    .LONG   0               ; PID OF THIS PROCESS
0000011C  0118         113 CREPID:     .BLKL   1               ; PID OF CREATED PROCESS
00000120  011C         114 SUBJPID:    .BLKL   1               ; PID OF SUBJECT PROCESS (SELF OR OTHER)
00000128  0120         115 ABS_3SEC:   .BLKQ   1               ; WILL HOLD ABS TIME VALUE FOR NOW + 3 SECS
00000130  0128         116 ABS_PAST:   .BLKQ   1               ; WILL HOLD ABS TIME VALUE FOR TIME IN PAST
00000131  0130         117 LONG_WAIT:  .BLKB   1               ; LONG WAIT INDICATOR; 0=NO LONG WAIT
```

```
                      0131      119          .SBTTL  CONDITION TABLES
                      0131      120   ;
                      0131      121   ;     ***** CONDITION TABLES FOR SCH/CANWAK SYSTEM SERVICE *****
                      0131      122   ;
                      0131      123          COND    1,NOTARG,<PID ADDRESS>,-
                      0131      124                  <NOT SPECIFIED>,-
                      0131      125                  <SPECIFIED, NON-ZERO>,-
                      0131      126                  <SPECIFIED, ZERO>,-
                      0131      127
          00000000' 017C      128                  .ADDRESS    0
          0000011C' 0180      129                  .ADDRESS    SUBJPID
          00000110' 0184      130                  .ADDRESS    ZEROPID
                      0188      131   ;
                      0188      132          COND    2,NOTARG,<PROCESS NAME ADDRESS>,-
                      0188      133                  <SPECIFIED>,-
                      0188      134                  <NOT SPECIFIED>,-
                      0188      135
          00000051' 01BE      136                  .ADDRESS    SUBJPRN
          00000000' 01C2      137                  .ADDRESS    0
                      01C6      138   ;
                      01C6      139          COND    3,NOTARG,<PROCESS TYPE>,-
                      01C6      140                  <SELF>,-
                      01C6      141                  <SUBPROCESS>,-
                      01C6      142                  <DETACHED, DIFFERENT GROUP>,-
                      01C6      143                  <DETACHED, SAME GROUP, SAME MEMBER>,-
                      01C6      144                  <DETACHED, SAME GROUP, DIFFERENT MEMBER>,-
                      01C6      145
          FFFFFFFF   025B      146                  .LONG       ^XFFFFFFFF        ; PSEUDO-UIC
          00000000   025F      147                  .LONG       0                ; PSEUDO-UIC
          00000267   0263      148                  .BLKL       1                ; UIC
          0000026B   0267      149                  .BLKL       1                ; UIC
          0000026F   026B      150                  .BLKL       1                ; UIC
                      026F      151   ;
                      026F      152          COND    4,NOTARG,<ORDERING OF CANCEL/WAKE/REPEAT>,-
                      026F      153                  <CANCEL, WAKE, REPEAT>,-
                      026F      154                  <WAKE, CANCEL, REPEAT>,-
                      026F      155                  <WAKE, REPEAT, CANCEL>,-
                      026F      156                  <WAKE, CANCEL>,-
                      026F      157
 00000090'00000120' 02EB      158                  .ADDRESS    ABS_3SEC,DELTA_1SEC   ; DAYTIM, REPTIM ARG ADDRESSES
 000000A0'00000090' 02F3      159                  .ADDRESS    DELTA_1SEC,DELTA_3SEC ; DAYTIM, REPTIM ARG ADDRESSES
 00000000'00000000' 02FB      160                  .ADDRESS    ONES,ONES            ; DAYTIM, REPTIM ARG ADDRESSES
 00000000'00000090' 0303      161                  .ADDRESS    DELTA_1SEC,0         ; DAYTIM, REPTIM ARG ADDRESSES
                      030B      162   ;
                      030B      163          COND    5,NULL
                      030C      164
          00000000   165          .PSECT  SATSSS61,RD,WRT,EXE
```

```
                              0000    167              .SBTTL  TM_SETUP, TM_CLEANUP
                              0000    168  ;++
                              0000    169  ; FUNCTIONAL DESCRIPTION:
                              0000    170  ;
                              0000    171  ;           TM_SETUP AND TM_CLEANUP ARE CALLED TO PERFORM
                              0000    172  ; REQUIRED HOUSEKEEPING AT THE BEGINNING AND END, RESPECTIVELY, OF
                              0000    173  ; TEST MODULE EXECUTION.
                              0000    174  ;
                              0000    175  ; CALLING SEQUENCE:
                              0000    176  ;
                              0000    177  ;     BSBW TM_SETUP    BSBW TM_CLEANUP
                              0000    178  ;
                              0000    179  ; INPUT PARAMETERS:
                              0000    180  ;
                              0000    181  ;     NONE
                              0000    182  ;
                              0000    183  ; IMPLICIT INPUTS:
                              0000    184  ;
                              0000    185  ;     NONE
                              0000    186  ;
                              0000    187  ; OUTPUT PARAMETERS:
                              0000    188  ;
                              0000    189  ;     NONE
                              0000    190  ;
                              0000    191  ; IMPLICIT OUTPUTS:
                              0000    192  ;
                              0000    193  ;     TM_SETUP:  COND TABLE INDEX REGISTERS (R2,3,4,5,6) CLEARED;
                              0000    194  ;                ALL PRIVILEGES ACQUIRED.
                              0000    195  ;
                              0000    196  ; COMPLETION CODES:
                              0000    197  ;
                              0000    198  ;     EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
                              0000    199  ;
                              0000    200  ; SIDE EFFECTS:
                              0000    201  ;
                              0000    202  ;     SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
                              0000    203  ;     (VIA RSB) IF ERROR ENCOUNTERED.
                              0000    204  ;
                              0000    205  ;--
                              0000    206
                              0000    207
                              0000    208
                              0000    209  TM_SETUP::
              52    D4        0000    210           CLRL    R2                      ; INITIALIZE
              53    D4        0002    211           CLRL    R3                      ; .. CONDITION
              54    D4        0004    212           CLRL    R4                      ; .... TABLE
              55    D4        0006    213           CLRL    R5                      ; ...... INDEX
              56    D4        0008    214           CLRL    R6                      ; ........ REGISTERS
            FFF3'   30        000A    215           BSBW    MOD_MSG_PRINT           ; PRINT TEST MODULE BEGIN MSG
   00000000'EF  00000000'EF  DE  000D  216          MOVAL   TEST_MOD_SUCC,TMD_ADDR  ; ASSUME END MSG WILL SHOW SUCCESS
   03    00  00000000'8F  F0  0018  217             INSV    #SUCCESS,#0,#3,MOD_MSG_CODE ; ADJUST STATUS CODE FOR SUCCESS
              00000000'EF        0020
                              0025    218           MODE    TO,5$,KRNL              ; KERNEL MODE TO ACCESS PHD
      59  00000000'9F  D0    0048    219            MOVL    @#CTL$GL_PHD,R9         ; GET PROCESS HEADER ADDRESS
   00000000'EF  69      DE    004F    220            MOVAL   PHD$Q_PRIVMSK(R9),PRIVMASK ; GET PRIV MASK ADDRESS
                              0056    221           MODE    FROM,5$ ; BACK TO USER MODE
                              0057    222           PRIV    ADD,ALL                 ; GET ALL PRIVILEGES
```

```
                              0077  223           $SETPRN_S TEST_MOD_NAME_D        ; SET PROCESS NAME
                              0084  224           SS_CHECK NORMAL                  ; CHECK STATUS CODE RETURNED FROM SETPRN
                              00B2  225           $WAKE_S SELFPID                  ; GET MY PID
                              00C1  226           SS_CHECK NORMAL                  ; CHECK FOR NORMAL RETURN
                              00EF  227           $HIBER_S                         ; UNDO ABOVE WAKE
                              00F6  228           SS_CHECK NORMAL                  ; CHECK FOR NORMAL RETURN
                              0124  229   :
                              0124  230   : THE FOLLOWING CODE ESTABLISHES UIC'S IN THE CONDITION 3 TABLE
                              0124  231   :
                              0124  232           MODE     TO,20$,KRNL             ; KERNEL MODE TO ACCESS PCB
          59    00000000'9F  D0 0147  233         MOVL     @#SCH$GL_CURPCB,R9      ; GET CURRENT PCB ADDRESS
                59    00BC C9 D0 014E  234         MOVL     PCB$L_UIC(R9),R9       ; PICK UP UIC FROM PCB
                              0153  235           MODE     FROM,20$                ; ... AND GET BACK TO USER MODE
                              0154  236   :
                              0154  237   : R9 NOW CONTAINS "MY" UIC
                              0154  238   :
          5A    02 9A 0154  239           MOVZBL   #2,R10                         ; GET COND3 TABLE INDEX NUMBER INTO A REG
          59    00010000 8F C1 0157  240           ADDL3    #^X10000,R9,COND3_E[R10] ; PUT DIFF GROUP UIC INTO 3RD TABLE ELT
          0000025B'EF4A      015E
                        5A   D6 0164  241           INCL     R10                   ; POINT TO 4TH COND3 TABLE ELEMENT
          0000025B'EF4A 59   D0 0166  242           MOVL     R9,COND3_E[R10]       ; PUT MY UIC INTO TABLE
                        5A   D6 016E  243           INCL     R10                   ; POINT TO 5TH COND3 TABLE ELEMENT
          0000025B'EF4A 59   01 C1 0170  244         ADDL3    #1,R9,COND3_E[R10]    ; PUT DIFF MEMBER UIC INTO THE TABLE
                              0179  245           $CREMBX_S CHAN=MBXCHAN, LOGNAM=SUBJPRN, - ; GET MAILBOX FOR PROCESS
                              0179  246                   MAXMSG=#120, PROMSK=#0, BUFQUO=#240
                              019E  247           SS_CHECK NORMAL                  ; CHECK NORMAL COMPLETION
                              01CC  248           $GETCHN_S CHAN=MBXCHAN, -        ; GET CHAN INFO (UNIT NUMBER)
                              01CC  249                   PRIBUF=MBXCHANINFO
                              01E6  250           SS_CHECK NORMAL                  ; CHECK NORMAL COMPLETION
          00000088'EF  00000020'EF 3C 0214  251    MOVZWL   MBXCHANINFO+8+DIB$W_UNIT,MBXUNIT ; SAVE MAILBOX UNIT NUMBER
                              021F  252           $BINTIM_S TIMBUF=TIME_PAST, -    ; SET UP A PAST TIME IN ABSOLUTE FORMAT
                              021F  253                   TIMADR=ABS_PAST
                        05 0232  254                 RSB                          ; RETURN TO MAIN ROUTINE
                              0233  255   TM_CLEANUP::
                              0233  256           $DELMBX_S  MBXCHAN               ; DELETE TERMINATION MAILBOX
                   FDBC'  30 0241  257             BSBW     MOD_MSG_PRINT          ; PRINT TEST MODULE END MSG
                        05 0244  258                 RSB                          ; RETURN TO MAIN ROUTINE
```

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V04-000

J 10
SATS SYST SERV TESTS $SCH/CANWAK (SUCC 16-SEP-1984 00:59:38 VAX/VMS Macro V04-00   Page 8
CONDITION SUBROUTINES - SETUP AND CLEANU 5-SEP-1984 04:32:50 [UETPSY.SRC]SATSSS61.MAR;1   (1)

```
0245  260              .SBTTL  CONDITION SUBROUTINES - SETUP AND CLEANUP
0245  261    ;++
0245  262    ; FUNCTIONAL DESCRIPTION:
0245  263    ;
0245  264    ;          CONDX AND CONDX_CLEANUP ARE SUBROUTINES WHICH ARE EXECUTED
0245  265    ; BEFORE AND AFTER THE VERIFY SUBROUTINE, RESPECTIVELY, WHENEVER A NEW
0245  266    ; CONDITION X VALUE IS SELECTED (SEE FUNCTIONAL DESCRIPTION OF SUCCOMMON
0245  267    ; ROUTINE IN SUCCOMMON.MAR). ANY SETUP FUNCTION PARTICULAR TO THE
0245  268    ; CONDITION X TABLE IS INCLUDED IN THE CONDX SUBROUTINE AND CLEANED
0245  269    ; UP, IF NECESSARY, IN THE CONDX_CLEANUP SUBROUTINE. THIS INCLUDES,
0245  270    ; ESPECIALLY, CODE TO DETECT CONFLICTS AMONG CURRENT ENTRIES IN TWO
0245  271    ; OR MORE CONDITION TABLES. IF A CONFLICT IS DETECTED, A NON-ZERO
0245  272    ; VALUE IS STORED INTO CONFLICT, WHICH CAUSES THE CALLING ROUTINE
0245  273    ; (SUCCOMMON) TO SKIP THE CURRENT ENTRY IN THE CONDITION X TABLE.
0245  274    ;
0245  275    ; CALLING SEQUENCE:
0245  276    ;
0245  277    ;      BSBW CONDX   BSBW CONDX_CLEANUP
0245  278    ;          WHERE X = 1,2,3,4,5
0245  279    ;
0245  280    ; INPUT PARAMETERS:
0245  281    ;
0245  282    ;      CONFLICT = 0
0245  283    ;
0245  284    ; IMPLICIT INPUTS:
0245  285    ;
0245  286    ;      R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
0245  287    ;          FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
0245  288    ;
0245  289    ; OUTPUT PARAMETERS:
0245  290    ;
0245  291    ;      CONFLICT SET TO NON-ZERO IF COND TABLE CONFLICT DETECTED.
0245  292    ;
0245  293    ; IMPLICIT OUTPUTS:
0245  294    ;
0245  295    ;      R2,3,4,5,6 PRESERVED
0245  296    ;
0245  297    ; COMPLETION CODES:
0245  298    ;
0245  299    ;      NONE
0245  300    ;
0245  301    ; SIDE EFFECTS:
0245  302    ;
0245  303    ;      NONE
0245  304    ;
0245  305    ;--
0245  306
0245  307
0245  308
0245  309    COND1::
05  0245  310          RSB                              ; RETURN TO MAIN ROUTINE
0246  311    COND1_CLEANUP::
05  0246  312          RSB                              ; RETURN TO MAIN ROUTINE
0247  313    COND2::
05  0247  314          RSB                              ; RETURN TO MAIN ROUTINE
0248  315    COND2_CLEANUP::
05  0248  316          RSB                              ; RETURN TO MAIN ROUTINE
```

K 10

SATSSS61   SATS SYST SERV TESTS $SCH/CANWAK (SUCC 16-SEP-1984 00:59:38 VAX/VMS Macro V04-00   Page 9
V04-000   CONDITION SUBROUTINES - SETUP AND CLEANU 5-SEP-1984 04:32:50 [UETPSY.SRC]SATSSS61.MAR;1   (1)

```
                                        0249    317 COND3::
                  02    54   D1 0249    318             CMPL    R4,#2                    ; DOES CONDITION 3 SPECIFY DIFFERENT GROUP ?
                        35   13 024C    319             BEQL    20$                      ; YES -- THIS IS CONFLICT BECAUSE OF
                               024E    320                                              ; ... USE OF COMMON CLUSTERS
 0000017C'EF42   0000011C'8F  D1 024E    321             CMPL    #SUBJPID,COND1_E[R2]     ; NON-ZERO PID SPECIFIED ?
                        19   13 025A    322             BEQLU   10$                      ; YES -- PROCESS IS 'OTHER'
                 000001BE'EF43 D5 025C    323             TSTL    COND2_E[R3]             ; IS PROCESS NAME SPECIFIED ?
                        10   12 0263    324             BNEQ    10$                      ; YES -- SUBJECT PROCESS IS 'OTHER'
                               0265    325 5$:
                               0265    326 ;
                               0265    327 ; PROCESS IS "SELF"
                               0265    328 ;
 0000025B'EF44   00000000'EF  D1 0265    329             CMPL    ONES,COND3_E[R4]        ; DOES CONDITION 3 SPECIFY "SELF" ?
                        1B   13 0271    330             BEQLU   COND3X                   ; YES -- THEN ALL 3 CONDIT'NS ARE CONSISTENT
                        0E   11 0273    331             BRB     20$                      ; NO -- INDICATE CONFLICT & GET OUT
                               0275    332 10$:
                               0275    333 ;
                               0275    334 ; PROCESS IS "OTHER"
                               0275    335 ;
 0000025B'EF44   00000000'EF  D1 0275    336             CMPL    ONES,COND3_E[R4]        ; DOES CONDITION 3 SPECIFY "SELF" ?
                        0B   12 0281    337             BNEQU   COND3X                   ; NO -- THEN ALL 3 CONDITIONS ARE CONSISTENT
                               0283    338 20$:
 00000000'EF     00000000'EF  90 0283    339             MOVB    ONES,CONFLICT           ; YES -- INDICATE CONFLICT
                               028E    340 COND3X:
                        05 028E    341             RSB                              ; RETURN TO MAIN ROUTINE
                               028F    342 COND3_CLEANUP::
                        05 028F    343             RSB                              ; RETURN TO MAIN ROUTINE
                               0290    344 COND4::
                        05 0290    345             RSB                              ; RETURN TO MAIN ROUTINE
                               0291    346 COND4_CLEANUP::
                        05 0291    347             RSB                              ; RETURN TO MAIN ROUTINE
                               0292    348 COND5::
                        05 0292    349             RSB                              ; RETURN TO MAIN ROUTINE
                               0293    350 COND5_CLEANUP::
                        05 0293    351             RSB                              ; RETURN TO MAIN ROUTINE
```

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                                        0294    353                                    .SBTTL  FORM_CONDS
                                        0294    354         ;++
                                        0294    355         ; FUNCTIONAL DESCRIPTION:
                                        0294    356         ;
                                        0294    357         ;             FORM_CONDS FORMATS AND PRINTS INFORMATION ABOUT
                                        0294    358         ;  THE CURRENT ELEMENT IN EACH OF THE CONDITION TABLES.
                                        0294    359         ;
                                        0294    360         ; CALLING SEQUENCE:
                                        0294    361         ;
                                        0294    362         ;       BSBW FORM_CONDS
                                        0294    363         ;
                                        0294    364         ; INPUT PARAMETERS:
                                        0294    365         ;
                                        0294    366         ;       NONE
                                        0294    367         ;
                                        0294    368         ; IMPLICIT INPUTS:
                                        0294    369         ;
                                        0294    370         ;       R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
                                        0294    371         ;         FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
                                        0294    372         ;       FOR X = 1,2,3,4,5 :
                                        0294    373         ;               CONDX_T - TITLE TEXT FOR CONDX TABLE
                                        0294    374         ;               CONDX_TAB - ELEMENT TEXT FOR CONDX TABLE
                                        0294    375         ;               CONDX_C - CONTEXT OF THE CONDX TABLE
                                        0294    376         ;               CONDX_E - DATA ELEMENTS OF THE CONDX TABLE
                                        0294    377         ;
                                        0294    378         ; OUTPUT PARAMETERS:
                                        0294    379         ;
                                        0294    380         ;       NONE
                                        0294    381         ;
                                        0294    382         ; IMPLICIT OUTPUTS:
                                        0294    383         ;
                                        0294    384         ;       NONE
                                        0294    385         ;
                                        0294    386         ; COMPLETION CODES:
                                        0294    387         ;
                                        0294    388         ;       NONE
                                        0294    389         ;
                                        0294    390         ; SIDE EFFECTS:
                                        0294    391         ;
                                        0294    392         ;       NONE
                                        0294    393         ;
                                        0294    394         ;--
                                        0294    395
                                        0294    396
                                        0294    397
                                        0294    398         FORM_CONDS::
                                        0294    399                 $FAO_S  MSG1_INP_CTL,FAO_LEN,FAO_DESC,TESTNUM
                          FD4A'    30   02B3    400                                                         ; FORMAT CONDITIONS HEADER MSG
                                 14  00 91 02B6 401                 BSBW    OUTPUT_MSG                      ; ... AND PRINT IT
                                  03    12   02B9 402                 CMPB    #COND1_C,#NULL                 ; IS CONDITION 1 NULL ?
                                       00BF 31  02BB 403              BNEQU   10$                            ; NO -- CONTINUE
                                        02BE    404                 BRW     FORM_CONDSX                     ; YES -- SUBROUTINE IS FINISHED
                                        02BE    405         10$:
      00000000'EF   00000131'EF   DE 02BE 406              MOVAL   COND1_T,MSG_A                   ; SAVE ADDRESS OF CONDITION 1 TITLE FOR FAO
      00000000'EF   0000013E'EF42 D0 02C9 407              MOVL    COND1_TAB[R2],MSG_B             ; SAVE ADDR OF COND 1 CURR TEXT ELT FOR FAO
            00000000'EF   00  90 02D5 408                  MOVB    #CONDT_C,MSG_CTXT               ; SAVE CONDITION 1 CONTEXT FOR FAO
                                        02DC    409                 MOV_VAL COND1_C,CONDT_E[R2],MSG_DATA1 ; GIVE COND 1 DATA VALUE TO FAO
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                              FD21'  30  02DC   410            BSBW    WRITE_MSG2                    ; FORMAT AND WRITE CONDITION 1 MSG
                         14    00  91  02DF   411            CMPB    #COND2_C,#NULL                ; IS CONDITION 2 NULL ?
                               03  12  02E2   412            BNEQU   20$                           ; NO -- CONTINUE
                             0096  31  02E4   413            BRW     FORM_CONDSX                   ; YES -- SUBROUTINE IS FINISHED
                                       02E7   414  20$:
   00000000'EF    00000188'EF  DE  02E7   415            MOVAL   COND2_T,MSG_A                 ; SAVE ADDRESS OF CONDITION 2 TITLE FOR FAO
   00000000'EF   0000019E'EF43  D0  02F2   416            MOVL    COND2_TAB[R3],MSG_B           ; SAVE ADDR OF COND 2 CURR TEXT ELT FOR FAO
        00000000'EF    00  90  02FE   417            MOVB    #COND2_C,MSG_CTXT             ; SAVE CONDITION 2 CONTEXT FOR FAO
                                       0305   418            MOV VAL COND2_C(COND2_E[R3],MSG_DATA1 ; GIVE COND 2 DATA VALUE TO FAO
                              FCF8'  30  0305   419            BSBO    WRITE_MSG2                    ; FORMAT AND WRITE CONDITION 2 MSG
                         14    00  91  0308   420            CMPB    #COND3_C,#NULL                ; IS CONDITION 3 NULL ?
                               03  12  030B   421            BNEQU   30$                           ; NO -- CONTINUE
                             006D  31  030D   422            BRW     FORM_CONDSX                   ; YES -- SUBROUTINE IS FINISHED
                                       0310   423  30$:
   00000000'EF    000001C6'EF  DE  0310   424            MOVAL   COND3_T,MSG_A                 ; SAVE ADDRESS OF CONDITION 3 TITLE FOR FAO
   00000000'EF   000001D4'EF44  D0  031B   425            MOVL    COND3_TAB[R4],MSG_B           ; SAVE ADDR OF COND 3 CURR TEXT ELT FOR FAO
        00000000'EF    00  90  0327   426            MOVB    #COND3_C,MSG_CTXT             ; SAVE CONDITION 3 CONTEXT FOR FAO
                                       032E   427            MOV VAL COND3_C(COND3_E[R4],MSG_DATA1 ; GIVE COND 3 DATA VALUE TO FAO
                              FCCF'  30  032E   428            BSBO    WRITE_MSG2                    ; FORMAT AND WRITE CONDITION 3 MSG
                         14    00  91  0331   429            CMPB    #COND4_C,#NULL                ; IS CONDITION 4 NULL ?
                               47  13  0334   430            BEQLU   FORM_CONDSX                   ; YES -- SUBROUTINE IS FINISHED
   00000000'EF    0000026F'EF  DE  0336   431            MOVAL   COND4_T,MSG_A                 ; SAVE ADDRESS OF CONDITION 4 TITLE FOR FAO
   00000000'EF   0000028F'EF45  D0  0341   432            MOVL    COND4_TAB[R5],MSG_B           ; SAVE ADDR OF COND 4 CURR TEXT ELT FOR FAO
        00000000'EF    00  90  034D   433            MOVB    #COND4_C,MSG_CTXT             ; SAVE CONDITION 4 CONTEXT FOR FAO
                                       0354   434            MOV VAL COND4_C(COND4_E[R5],MSG_DATA1 ; GIVE COND 4 DATA VALUE TO FAO
                              FCA9'  30  0354   435            BSBO    WRITE_MSG2                    ; FORMAT AND WRITE CONDITION 4 MSG
                         14    14  91  0357   436            CMPB    #COND5_C,#NULL                ; IS CONDITION 5 NULL ?
                               21  13  035A   437            BEQLU   FORM_CONDSX                   ; YES -- SUBROUTINE IS FINISHED
   00000000'EF    0000030B'EF  DE  035C   438            MOVAL   COND5_T,MSG_A                 ; SAVE ADDRESS OF CONDITION 5 TITLE FOR FAO
   00000000'EF   0000030B'EF46  D0  0367   439            MOVL    COND5_TAB[R6],MSG_B           ; SAVE ADDR OF COND 5 CURR TEXT ELT FOR FAO
        00000000'EF    14  90  0373   440            MOVB    #COND5_C,MSG_CTXT             ; SAVE CONDITION 5 CONTEXT FOR FAO
                                       037A   441            MOV VAL COND5_C(COND5_E[R6],MSG_DATA1 ; GIVE COND 5 DATA VALUE TO FAO
                              FC83'  30  037A   442            BSBO    WRITE_MSG2                    ; FORMAT AND WRITE CONDITION 5 MSG
                                       037D   443  FORM_CONDSX:
                               05  037D   444            RSB                                   ; RETURN TO CALLER
```

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```
037E    446                        .SBTTL  VERIFY
037E    447  ;++
037E    448  ; FUNCTIONAL DESCRIPTION:
037E    449  ;
037E    450  ;          VERIFY IS CALLED ONCE FOR EACH COMBINATION OF CONDITION
037E    451  ; TABLE VALUES (AS DETERMINED BY THE INDEX REGISTERS R2,3,4,5,6 FOR
037E    452  ; COND TABLES 1,2,3,4,5, RESPECTIVELY). VERIFY ESTABLISHES THE CONDITIONS
037E    453  ; SPECIFIED BY THE COND TABLES AND ISSUES THE SUBJECT SYSTEM SERVICE
037E    454  ; ($SCH/CANWAK). THEN, THE SUCCESSFUL OPERATION OF THE SERVICE IS VERIFIED
037E    455  ; BY EXAMINING THE STATUS CODE RETURNED, THE VALUES FOR RETURN ARGUMENTS
037E    456  ; AND THE FUNCTIONALITY PERFORMED. THE EXAMINATIONS TAKE THE FORM OF
037E    457  ; COMPARISONS AGAINST EXPECTED VALUES. ANY FAILING COMPARISON CAUSES AN
037E    458  ; ERR_EXIT MACRO TO BE EXECUTED (EITHER DIRECTLY, OR INDIRECTLY,
037E    459  ; THROUGH THE SS_CHECK MACRO); ERR_EXIT SETS EFLAG TO NON-ZERO,
037E    460  ; PRINTS ERROR MESSAGES AND CAUSES AN IMMEDIATE RSB TO CALLER.
037E    461  ; WHEN ERR_EXIT IS EXECUTED, FURTHER CALLS TO VERIFY ARE SUPPRESSED,
037E    462  ; AND, AFTER EXECUTING CLEANUP SUBROUTINES, THE IMAGE EXITS.
037E    463  ;
037E    464  ; CALLING SEQUENCE:
037E    465  ;
037E    466  ;     BSBW VERIFY
037E    467  ;
037E    468  ; INPUT PARAMETERS:
037E    469  ;
037E    470  ;     NONE
037E    471  ;
037E    472  ; IMPLICIT INPUTS:
037E    473  ;
037E    474  ;     R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
037E    475  ;        FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
037E    476  ;     FOR X = 1,2,3,4,5 :
037E    477  ;           CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
037E    478  ;              TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
037E    479  ;              ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
037E    480  ;              FOR CONDX_E.
037E    481  ;
037E    482  ; OUTPUT PARAMETERS:
037E    483  ;
037E    484  ;     NONE
037E    485  ;
037E    486  ; IMPLICIT OUTPUTS:
037E    487  ;
037E    488  ;     VERIFY HAS NO OUTPUT. SINCE ITS PURPOSE IS TO TEST FOR ERRORS,
037E    489  ;     IT MERELY RETURNS TO CALLER NORMALLY AFTER THE TESTS, PROVIDING
037E    490  ;     ALL WERE SUCCESSFUL; IF AN ERROR IS DISCOVERED, RETURN IS VIA
037E    491  ;     AN ERR_EXIT OR SS_CHECK MACRO, BOTH OF WHICH DOCUMENT DETECTED
037E    492  ;     ERRORS.
037E    493  ;
037E    494  ; COMPLETION CODES:
037E    495  ;
037E    496  ;     EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
037E    497  ;
037E    498  ; SIDE EFFECTS:
037E    499  ;
037E    500  ;     SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
037E    501  ;     (VIA RSB) IF ERROR ENCOUNTERED.
037E    502  ;
```

B 11

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```
                            037E     503   ;--
                            037E     504
                            037E     505
                            037E     506
                            037E     507   VERIFY::
            00000000'EF 95  037E     508        TSTB    CFLAG              ; SHOULD CONDITIONS BE PRINTED ?
                     03 13  0384     509        BEQL    5$                 ; NO -- CONTINUE
                   FF0B 30  0386     510        BSBW    FORM_CONDS         ; YES -- FMT & PRINT ALL CONDS FOR THIS T.C.
                            0389     511   5$:
  0000011C'EF 00000114'EF DO 0389    512        MOVL    SELFPID,SUBJPID    ; ASSUME THE SUBJECT PID IS SELF
            00000110'EF D4  0394     513        CLRL    ZEROPID            ; CLEAR ZERO PID
            00000130'EF 94  039A     514        CLRB    LONG_WAIT          ; INITIALIZE LONG WAIT INDICATOR
  0000025B'EF44 00000000'EF D1 03A0  515        CMPL    ONES,COND3_E[R4]   ; IS PROCESS FOR THIS TEST CASE SELF ?
                     03 12  03AC     516        BNEQU   7$                 ; NO -- CONTINUE
                   0070 31  03AE     517        BRW     10$                ; YES -- DON'T CREATE A PROCESS
                            03B1     518   7$:
                            03B1     519        $CREPRC_S PIDADR=CREPID, PRCNAM=SUBJPRN, -
                            03B1     520              UIC=COND3_E[R4], IMAGE=IMAGNAM, -
                            03B1     521              MBXUNT=MBXUNIT;, QUOTA=QUOTALIST
                            03E8     522                                   ; CREATE THE SUBJECT PROCESS
                            03E8     523        SS_CHECK NORMAL            ; ... AND MAKE SURE IT CREATED OK
  0000011C'EF 00000118'EF DO 0416    524        MOVL    CREPID,SUBJPID     ; MAKE THE SUBJCT PID = THE ONE JUST CREATED
                            0421     525   10$:
  0000010C'EF 0000017C'EF42 DO 0421  526        MOVL    COND1_E[R2],DEST_PIDADR ; GET PID ADDRESS OUT OF TABLE
           59 000001BE'EF43 DO 042D  527        MOVL    COND2_E[R3],R9     ; PRCNAM ADDR INTO REG FOR INDIRECT REF'RNCE
           57 000002EB'EF45 7D 0435  528        MOVQ    COND4_E[R5],R7     ; GET DAYTIM, REPTIM ARG ADDRESSES INTO REGS
                            043D     529        $CANWAK_S SUBJPID          ; ISSUE PRELIM CANWAK TO CLEAR THE DECKS
                            044C     530        SS_CHECK NORMAL           ; CHECK FOR NORMAL RETURN
                            047A     531        $SETIMR_S DAYTIM=DELTA_10SEC, - ; SET "WATCHDOG" TIMER TO TRIP IF LONG WAIT
                            047A     532              ASTADR=WATCH_AST
                            0491     533        SS_CHECK NORMAL           ; CHECK FOR NORMAL RETURN
                            04BF     534        $GETTIM_S ABS_3SEC        ; GET CURRENT TIME
                            04CC     535        SS_CHECK NORMAL           ; CHECK FOR NORMAL RETURN
  00000120'EF 000000B8'EF CO 04FA    536        ADDL    POS_3SEC,ABS_3SEC ; ADD 3 SECONDS TO LOWER LONGWORD
  00000124'EF 000000BC'EF D8 0505    537        ADWC    POS_3SEC+4,ABS_3SEC+4 ; ADD POSSIBLE CARRY TO HIGHER LONGWORD
                            0510     538                                   ; ABS_3SEC IS NOW VALID IF USED IN $SCHDWK
                            0510     539   ;
                            0510     540   ; ***** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE *****
                            0510     541   ;
                            0510     542        $SCHDWK_S PIDADR=@DEST_PIDADR, PRCNAM=(R9), -
                            0510     543              DAYTIM=(R7), REPTIM=(R8)
        00000000'8F 50 D1  0523     544        CMPL    R0,#SS$_NORMAL    ; CODE RECEIVED = CODE EXPECTED ?
                     61 13  052A     545        BEQLU   15$               ; YES -- CONTINUE
  00000000'EF 00000000'8F DO 052C   546        MOVL    #SS$_NORMAL,EXPV  ; NO -- LOAD UP EXPECTED AND ...
        00000000'EF 50 DO  0537     547        MOVL    R0,RECV           ; ... RECEIVED VALUES, THEN EXIT
                            053E     548        ERR_EXIT LONG,<INCORRECT STATUS CODE RETURNED FROM SCHDWK>
                            058D     549   15$:
        0000010C'EF D5     058D     550        TSTL    DEST_PIDADR       ; PID RETURNED BY SCHDWK ?
                 68 13     0593     551        BEQL    20$               ; NO -- KEEP GOING
  0000010C'FF 0000011C'EF D1 0595   552        CMPL    SUBJPID,@DEST_PIDADR ; YES -- IS IT THE CORRECT ONE ?
                 5B 13     05A0     553        BEQL    20$               ; YES -- CONTINUE
  00000000'EF 0000011C'EF DO 05A2   554        MOVL    SUBJPID,EXPV      ; NO --LOAD UP EXPECTED AND
  00000000'EF 0000010C'FF DO 05AD   555        MOVL    @DEST_PIDADR,RECV ; ... RECEIVED VALUES, THEN EXIT
                            05B8     556        ERR_EXIT LONG,<INCORRECT PID RETURNED BY SCHDWK>
                            05FD     557   20$:
                            05FD     558        $CLREF_S EFN=#32          ; CLEAR EVENT FLAG 32
              2E 50 E8     0606     559        BLBS    R0,25$            ; KEEP GOING IF OK
```

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```
                                  0609    560            SS_CHECK NORMAL                        ; USE SS_CHECK MACRO TO TERMINATE TEST MOD
                                  0637    561    25$:
                                  0637    562            $SETIMR_S EFN=#32, -                   ; SET A 2-SECOND TIMER
                                  0637    563                    DAYTIM=DELTA_2SEC
                                  0648    564            SS_CHECK NORMAL                        ; CHECK FOR NORMAL RETURN
                                  0676    565            $WAITFR_S EFN=#32                      ; WAIT 2 SECONDS TO ALLOW PROPER SYNCH'N
                                  067F    566            SS_CHECK NORMAL                        ; CHECK FOR NORMAL RETURN
                00000110'EF   D4  06AD    567            CLRL    ZEROPID                        ; CLEAR OUT ZERO PID SCHDWK MAY HAVE SET
                                  06B3    568    ;
                                  06B3    569    ; ****** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE ******
                                  06B3    570    ;
                                  06B3    571            $CANWAK_S PIDADR=@DEST_PIDADR, PRCNAM=(R9)
                                  06C2    572                                                   ; CANCEL SCHEDULED WAKE OR REPEAT
        00000000'8F   50     D1  06C2    573            CMPL    R0,#SS$_NORMAL                 ; CODE RECEIVED = CODE EXPECTED ?
                      61     13  06C9    574            BEQLU   30$                            ; YES -- CONTINUE
00000000'EF  00000000'8F   D0  06CB    575            MOVL    #SS$_NORMAL,EXPV               ; NO -- LOAD UP EXPECTED AND ...
00000000'EF        50     D0  06D6    576            MOVL    R0,RECV                        ; ... RECEIVED VALUES, THEN EXIT
                                  06DD    577            ERR_EXIT LONG,<INCORRECT STATUS CODE RETURNED FROM CANWAK>
                                  072C    578    30$:
                0000010C'EF   D5  072C    579            TSTL    DEST_PIDADR                    ; PID RETURNED BY CANWAK ?
                      68     13  0732    580            BEQL    40$                            ; NO -- KEEP GOING
0000010C'FF  0000011C'EF   D1  0734    581            CMPL    SUBJPID,@DEST_PIDADR          ; YES -- IS IT THE CORRECT ONE ?
                      5B     13  073F    582            BEQL    40$                            ; YES -- CONTINUE
00000000'EF  0000011C'EF   D0  0741    583            MOVL    SUBJPID,EXPV                   ; NO --LOAD UP EXPECTED AND
00000000'EF  0000010C'FF   D0  074C    584            MOVL    @DEST_PIDADR,RECV             ; ... RECEIVED VALUES, THEN EXIT
                                  0757    585            ERR_EXIT LONG,<INCORRECT PID RETURNED BY CANWAK>
                                  079C    586    40$:
0000011C'EF  00000118'EF   D1  079C    587            CMPL    CREPID,SUBJPID                ; WAS A PROCESS CREATED ?
                      03     13  07A7    588            BEQLU   50$                            ; YES -- GO WAIT FOR IT TO END
                     014F    31  07A9    589            BRW     60$                            ; NO -- GO ISSUE HIBER
                                  07AC    590    50$:
                                  07AC    591            $ASCEFC_S EFN=#64, NAME=CLUSTER       ; ASSOC WITH CLUSTER FOR PROCESS SYNCHRO'N
                                  07C3    592            SS_CHECK  NORMAL                       ; CHECK FOR NORMAL STATUS
                                  07F1    593            $SETEF_S  EFN=#65                      ; LET CREATED PROC EXIT
                                  07FE    594            SS_CHECK  WASCLR                       ; BIT 65 SHOULD HAVE BEEN CLEAR
                                  082C    595            $WAITFR_S EFN=#64                      ; WAIT UNTIL CREATED PROC CAN HIBERNATE
                                  0839    596            SS_CHECK  NORMAL                       ; CHECK FOR NORMAL RETURN
                                  0867    597            $DACEFC_S EFN=#64                      ; DISASSOC CLUSTER
                                  0874    598            SS_CHECK  NORMAL                       ; CHECK FOR NORMAL STATUS
                                  08A2    599            $QIOW_S CHAN=MBXCHAN, FUNC=#IO$_READVBLK, -
                                  08A2    600                    P1=MBXBUFF+8, P2=MBXBUFF
                                  08CB    601                                                   ; WAIT FOR CREATED PROCESS TO SEND MAIL
                                  08CB    602            SS_CHECK NORMAL                        ; CHECK FOR NORMAL STATUS CODE
                      35     11  08F9    603            BRB     70$                            ; ... AND GO SEE IF WE WERE STUCK IN HIBER
                                  08FB    604    60$:
                                  08FB    605            $HIBER_S                               ; HIBERNATE TO SATISFY OUTSTANDING WAKE
                                  0902    606            SS_CHECK NORMAL                        ; ... MAKE SURE IT FINISHED OK
                                  0930    607    70$:
                                  0930    608    ;
                                  0930    609    ; CHECK TO SEE IF STUCK IN HIBER ....... IF LONG_WAIT
                                  0930    610    ; IS SET AND DID NOT EXPECT LONG WAIT, ISSUE ERR_EXIT
                                  0930    611    ; SAYING "STUCK IN HIBER".
                                  0930    612    ;
                00000130'EF   95  0930    613            TSTB    LONG_WAIT                      ; DID WE WAIT A LONG TIME ?
                      5C     13  0936    614            BEQL    VERIFYX                        ; NO -- THIS TEST CASE IS FINISHED
                      55     D5  0938    615            TSTL    R5                             ; YES -- DID WE EXPECT TO REMAIN IN HIB'N ?
                      58     13  093A    616            BEQL    VERIFYX                        ; YES -- THAT'S OK
```

```
00000000'EF  94  093C  617        CLRB    EXPV                         ; NO -- SOMETHING WENT WRONG .... LOAD UP
00000000'EF  94  0942  618        CLRB    RECV                         ; ... EXPECTED & RECEIVED VALUES, THEN EXIT
                 0948  619        ERR_EXIT BYTE,<SUBJECT PROCESS WAS LEFT IN HIBERNATION>
                 0994  620 VERIFYX:
             05  0994  621        RSB                                  ; RETURN TO CALLER
```

```
0995   623                    .SBTTL  VFY_CLEANUP
0995   624          ;++
0995   625          ; FUNCTIONAL DESCRIPTION:
0995   626          ;
0995   627          ;           VFY_CLEANUP EXECUTES SYSTEM SERVICES TO UNDO THE
0995   628          ; EFFECT OF THOSE ISSUED IN THE VERIFY SUBROUTINE. VFY_CLEANUP MUST
0995   629          ; ASSUME THAT VERIFY MAY NOT HAVE EXECUTED IN ITS ENTIRETY (IF AN
0995   630          ; ERROR IS FOUND). ALSO, VFY_CLEANUP MAY ISSUE SS_CHECK OR ERR_EXIT
0995   631          ; ONLY AFTER PERFORMING ALL OF ITS CLEANUP OPERATIONS; THIS IS REQUIRED
0995   632          ; IN THE EVENT THAT VFY_CLEANUP IS CALLED DURING ERROR PROCESSING,
0995   633          ; WHEN PERFORMING THE REQUIRED CLEANUP IS MORE IMPORTANT THAN
0995   634          ; POSSIBLY DISCOVERING A SECOND ERROR.
0995   635          ;
0995   636          ; CALLING SEQUENCE:
0995   637          ;
0995   638          ;     BSBW VFY_CLEANUP
0995   639          ;
0995   640          ; INPUT PARAMETERS:
0995   641          ;
0995   642          ;     NONE
0995   643          ;
0995   644          ; IMPLICIT INPUTS:
0995   645          ;
0995   646          ;     R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
0995   647          ;       FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
0995   648          ;     FOR X = 1,2,3,4,5 :
0995   649          ;           CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
0995   650          ;             TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
0995   651          ;             ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
0995   652          ;             FOR CONDX_E.
0995   653          ;
0995   654          ; OUTPUT PARAMETERS:
0995   655          ;
0995   656          ;     NONE
0995   657          ;
0995   658          ; IMPLICIT OUTPUTS:
0995   659          ;
0995   660          ;     NONE
0995   661          ;
0995   662          ; COMPLETION CODES:
0995   663          ;
0995   664          ;     EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
0995   665          ;
```

F 11

SATSSS61   SATS SYST SERV TESTS SSCH/CANWAK (SUCC 16-SEP-1984 00:59:38 VAX/VMS Macro V04-00   Page 17
V04-000   VFY_CLEANUP   5-SEP-1984 04:32:50 [UETPSY.SRC]SATSSS61.MAR;1   (2)

```
                              0995    667 ; SIDE EFFECTS:
                              0995    668 ;
                              0995    669 ;        SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
                              0995    670 ;        (VIA RSB) IF ERROR ENCOUNTERED.
                              0995    671 ;
                              0995    672 ;--
                              0995    673
                              0995    674
                              0995    675
                              0995    676 VFY_CLEANUP::
                              0995    677         $CANWAK_S SUBJPID            ; CANCEL ANY POSSIBLE OUTSTANDING WAKES
                              09A4    678         $CANTIM_S                   ; CANCEL WATCHDOG TIMER
  0000011C'EF  00000118'EF  D1 09AD    679         CMPL    CREPID,SUBJPID      ; WAS A PROCESS CREATED FOR THIS TEST CASE ?
                         OF  12 09B8    680         BNEQU   VFY_CLEANUPX        ; NO -- JUST EXIT
                              09BA    681         $DELPRC_S SUBJPID            ; YES -- DELETE IT
                              09C9    682 VFY_CLEANUPX:
                         05 09C9    683         RSB                         ; RETURN TO CALLER
```

```
                          09CA   685                    .SBTTL  WATCH_AST
                          09CA   686  ;
                          09CA   687  ; WATCH_AST SHOULD BE ENTERED ONLY WHEN THE CREATING OR CREATED
                          09CA   688  ; PROCESS IS HIBERNATING. IT IS SCHEDULED WITH A 10-SECOND TIMER,
                          09CA   689  ; WHICH IS CANCELED BEFORE DELIVERY IN ALL CASES EXCEPT WHEN THE
                          09CA   690  ; SUBJECT PROCESS GOES INTO AN UNSATISFIED HIBERNATION. WHEN
                          09CA   691  ; WATCH_AST IS ENTERED, IT SETS A FLAG INDICATING IT WAS ENTERED
                          09CA   692  ; (LONG_WAIT) TO NON-ZERO, AND ISSUES A $WAKE FOR THE SUBJECT
                          09CA   693  ; PROCESS; THIS SHOULD CLEAR THE HIBERNATION. BACK IN THE MAIN
                          09CA   694  ; ROUTINE, A CHECK IS MADE TO SEE IF THE WATCH_AST WAS ENTERED
                          09CA   695  ; AND WHETHER OR NOT SUCH ENTRY WAS EXPECTED. AN UNEXPECTED ENTRY
                          09CA   696  ; TO WATCH_AST CAUSES AN ERR_EXIT.
                          09CA   697  ;
                          09CA   698  WATCH_AST:
                    0000  09CA   699          .WORD   0                    ; ENTRY MASK
00000130'EF  00000000'EF   90  09CC   700          MOVB    ONES,LONG_WAIT       ; INDICATE THAT THE AST WAS ENTERED
                          09D7   701          $WAKE_S SUBJPID              ; WAKE THE (PRESUMABLY) HIBERNATING PROCESS
                      04  09E6   702          RET                          ; ... AND GET OUT
                          09E7   703          .END
```

Symbol	Value			Symbol	Value		
$$$$	= 00000952	R	04	CTL$GL_PHD	********	X	04
$$$CHARS	= 00000027			DELTA_10SEC	000000A8	R	02
$$$CHARS1	= 00000014			DELTA_1SEC	00000090	R	02
$$$CHARS2	= 00000014			DELTA_2SEC	00000098	R	02
$$$CHARS3	= 00000014			DELTA_3SEC	000000A0	R	02
$$$CHARS4	= 0000000C			DELTA_QSEC	000000B0	R	02
$$$CHARS5	= 00000000			DESC	= 00000010	G	
$$$COND_A	= 00000003			DEST_PIDADR	0000010C	R	03
$$$STRINGS	= 00000001			DIB$K_LENGTH	= 00000074		
$$$STRINGS2	= 00000005			DIB$W_UNIT	= 0000000C		
$$T1	= 00000001			EFLAG	********	X	04
$$T2	= 00000004			EXPV	********	X	04
ABS_3SEC	00000120	R	03	FAO_DESC	********	X	04
ABS_PAST	00000128	R	03	FAO_LEN	********	X	04
BYTE	= 00000001	G		FORM_CONDS	00000294	RG	04
CFLAG	********	X	04	FORM_CONDSX	0000037D	R	04
CHMRTN	********	X	04	IMAGNAM	00000065	R	02
CHM_CONT	********	X	04	IO$_READVBLK	********	X	04
CLUSTER	00000084	R	02	LONG	= 00000004	G	
COMP_SC	********	X	04	LONG_WAIT	00000130	R	03
CONDT	00000245	RG	04	MBXBUFF	0000008C	R	03
COND1_C	= 00000000			MBXCHAN	00000008	R	03
COND1_CLEANUP	00000246	RG	04	MBXCHANINFO	0000000C	R	03
COND1_E	0000017C	R	03	MBXUNIT	00000088	R	03
COND1_H	0000013D	RG	03	MOD_MSG_CODE	********	X	04
COND1_T	00000131	R	03	MOD_MSG_PRINT	********	X	04
COND1_TAB	0000013E	R	03	MSGT_INP_CTL	00000019	R	02
COND2	00000247	RG	04	MSG3_ERR_CTL	00000039	RG	02
COND2_C	= 00000000			MSG_A	********	X	04
COND2_CLEANUP	00000248	RG	04	MSG_B	********	X	04
COND2_E	000001BE	R	03	MSG_CTXT	********	X	04
COND2_H	0000019D	RG	03	NOTARG	= 00000000	G	
COND2_T	00000188	R	03	NULL	= 00000014	G	
COND2_TAB	0000019E	R	03	ONES	********	X	03
COND3	00000249	RG	04	ONE_SEC	= 00989680		
COND3X	0000028E	R	04	OUTPUT_MSG	********	X	04
COND3_C	= 00000000			PCB$L_OIC	= 000000BC		
COND3_CLEANUP	0000028F	RG	04	PCV	********	X	04
COND3_E	0000025B	R	03	PHD$Q_PRIVMSK	= 00000000		
COND3_H	000001D3	RG	03	POS_3SEC	000000B8	R	02
COND3_T	000001C6	R	03	PRIVMASK	00000000	R	03
COND3_TAB	000001D4	R	03	PRIV_ARGS	= 00000002		
COND4	00000290	RG	04	PROCESS_ERR	********	X	04
COND4_C	= 00000000			QUAD	= 00000008	G	
COND4_CLEANUP	00000291	RG	04	RECV	********	X	04
COND4_E	000002EB	R	03	REST_REGS	********	X	04
COND4_H	0000028E	RG	03	SAVE_REGS	********	X	04
COND4_T	0000026F	R	03	SCH$GL_CURPCB	********	X	04
COND4_TAB	0000028F	R	03	SELFPID	00000114	R	03
COND5	00000292	RG	04	SS$_NORMAL	********	X	04
COND5_C	= 00000014			SS$_WASCLR	********	X	04
COND5_CLEANUP	00000293	RG	04	SUBJPID	0000011C	R	03
COND5_H	0000030B	RG	03	SUBJPRN	00000051	R	02
COND5_T	0000030B	R	03	SUCCESS	********	X	04
COND5_TAB	0000030B	R	03	SYS$ASCEFC	********	GX	04
CONFLICT	********	X	04	SYS$BINTIM	********	GX	04
CREPID	00000118	R	03	SYS$CANTIM	********	GX	04

```
SYS$CANWAK                  ******** GX  04
SYS$CLREF                   ******** GX  04
SYS$CMKRNL                  ******** GX  04
SYS$CREMBX                  ******** GX  04
SYS$CREPRC                  ******** GX  04
SYS$DACEFC                  ******** GX  04
SYS$DELMBX                  ******** GX  04
SYS$DELPRC                  ******** GX  04
SYS$FAO                     ********  X  04
SYS$GETCHN                  ******** GX  04
SYS$GETTIM                  ******** GX  04
SYS$HIBER                   ******** GX  04
SYS$QIOW                    ******** GX  04
SYS$SCHDWK                  ******** GX  04
SYS$SETEF                   ******** GX  04
SYS$SETIMR                  ******** GX  04
SYS$SETPRN                  ******** GX  04
SYS$SETPRV                  ******** GX  04
SYS$WAITFR                  ******** GX  04
SYS$WAKE                    ******** GX  04
TESTNUM                     ********  X  04
TEST_MOD_NAME               00000000 RG  02
TEST_MOD_NAME_D             00000009 R   02
TEST_MOD_SUCC               ********  X  04
TIME_PAST                   000000C0 R   02
TMD_ADDR                    ********  X  04
TM_CLEANUP                  00000233 RG  04
TM_SETUP                    00000000 RG  04
VERIFY                      0000037E RG  04
VERIFYX                     00000994 R   04
VFY_CLEANUP                 00000995 RG  04
VFY_CLEANUPX                000009C9 R   04
WATCH_AST                   000009CA R   04
WORD                     =  00000002  G
WRITE_MSG2                  ********  X  04
ZEROPID                     00000110 R   03
```

```
                    +-----------------+
                    ! Psect synopsis !
                    +-----------------+
```

PSECT name	Allocation		PSECT No.		Attributes											
. ABS .	00000000	(0.)	00	(0.)	NOPIC	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
ABS	00000000	(0.)	01	(1.)	NOPIC	USR	CON	ABS	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE
RODATA	000000E0	(224.)	02	(2.)	NOPIC	USR	CON	REL	LCL	NOSHR	NOEXE	RD	NOWRT	NOVEC	LONG
RWDATA	0000030C	(780.)	03	(3.)	NOPIC	USR	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	NOVEC	LONG
SATSSS61	000009E7	(2535.)	04	(4.)	NOPIC	USR	CON	REL	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE

```
                  +------------------------+
                  ! Performance indicators !
                  +------------------------+
```

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.08	00:00:00.36
Command processing	113	00:00:00.63	00:00:02.52

```
Pass 1                                  329       00:00:10.90      00:00:18.26
Symbol table sort                         0       00:00:00.88      00:00:00.96
Pass 2                                  160       00:00:02.72      00:00:42.82
Symbol table output                      18       00:00:00.12      00:00:00.14
Psect synopsis output                     2       00:00:00.02      00:00:00.03
Cross-reference output                    0       00:00:00.00      00:00:00.00
Assembler run totals                    653       00:00:15.35      00:01:05.09
```

The working set limit was 1500 pages.
58672 bytes (115 pages) of virtual memory were used to buffer the intermediate code.
There were 30 pages of symbol table space allocated to hold 512 non-local and 76 local symbols.
703 source lines were read in Pass 1, producing 29 object records in Pass 2.
56 pages of virtual memory were used to define 46 macros.

```
                              +------------------------------+
                              ! Macro library statistics !
                              +------------------------------+
```

```
Macro library name                            Macros defined
------------------                            --------------

-$255$DUA28:[SHRLIB]UETP.MLB;1                       8
-$255$DUA28:[SYS.OBJ]LIB.MLB;1                       2
-$255$DUA28:[SYSLIB]STARLET.MLB;2                   33
TOTALS (all libraries)                             43
```

943 GETS were required to define 43 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:SATSSS61/OBJ=OBJ$:SATSSS61 MSRC$:SATSSS61/UPDATE=(ENH$:SATSSS61)+EXECML$/LIB+SHRLIB$:UETP/LIB